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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,662	06/01/2000	Madhav V. Marathe	081862.P175	5975

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EXAMINER

FERRIS, DERRICK W

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 05/17/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/586,662

Applicant(s)

MARATHE ET AL.

Examiner

Derrick W. Ferris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13, 15-24, 26-37 and 39-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-13, 15-24, 26-37 and 39-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Response to Amendment

1. **Claims 2-13, 15-24, 26-27, 28-37 and 39-50** as amended are still in consideration for this application. Applicant has amended claims 4, 28, and 41.
2. Examiner does **not withdraw** the obviousness rejection to *Hamami* in view of *Rubino et al.* for Office action filed 08/22/03. In addressing applicant's arguments in the response filed 11/24/03, the examiner notes two items of issue: (1) motivation and (2) detecting a failure using *a switch*.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found *either in the references themselves* or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is taught in *Rubino* and is thus proper since the motivation is found in at least one of the cited references. Furthermore, the passage cited by the applicant at column 2, lines 51-63 concerns recovery of data and not monitoring of connections using "detecting cells". In other words, the issue here is what is construed as "some data". Examiner does not consider "detecting cells" as "some data". "Detecting cells" are *control information* and not data. Instead, examiner construes "some data" in its plain and ordinary meaning as data sent over the connection. The examiner, however, will clean up the motivation in the rejection below.

In response to the second issue, examiner respectfully disagrees with applicant and furthermore states that applicant's interpretation of the reference is inapposite. At issue is the

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below passage for which applicant claims that an originating and destination device are not a switch but an end device which is inappropriate.

“It is important to note [sic] that both the originator and the destination of the call function to monitor the primary path for a failure. In addition, either the originator or the destination can detect the failure.” Column 9, lines 58-62 of Hamami.

In particular, applicant associates “originator” as “end user”. The above citation says “originator” and not “end user”. This is inappropriate given column 6, lines 21-25 of *Hamami* which discloses the following:

“Thus, the originating network element (NE) of the redundant VCC/VPC connection can be either the end user or an edge switch, and is referred to as the redundant VCC originator.” Emphasis added column 6, lines 21-25 of Hamami.

Also further see column 9, lines 44-55 of *Hamami*. Thus the “originator” can be an edge switch for monitoring a connection (i.e., detecting a failure). In other words, the examiner is reading the reference as an “edge switch”.

Finally, the examiner will not make the current Office action final since although the same reference is still applied, the examiner would like to give the applicant another opportunity to narrow the claims and/or rebut the examiner’s argument(s).

3. Examiner does **not withdraw** the obviousness rejection to *Hamami* in view of *Rubino et al.* and in further view of *Chen et al.* (“*Chen*”) for Office action filed 08/22/03. Examiner notes the same reasoning applies in addressing the previous rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 3-4, 5, 7-9, 14-16, 18, 19, 24, 28, 29, 31-33, 37, 40, 41, 42, 44-46 and 50** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,22,820 to *Hamami* in view U.S. Patent No. 6,424,629 to *Rubino et al.* ("*Rubino*").

As to **claim 4**, *Hamami* clearly discloses monitoring the primary VC [step 100 figure 7; column 9, lines 46-48] but is silent or deficient to monitoring a second virtual connection (i.e., in reference to applicant's recitation of transmitting a plurality of detecting cells along a second virtual connection). For the purpose of the rejection the "originator" is a "network edge switch", see e.g., column 9, lines 45-47.

Hamami is silent or deficient to the limitation "transmitting a plurality of detecting cells along a first and second virtual circuit". In particular, *Hamami* teaches a method of providing virtual circuit connection/virtual path connection redundancy on a selective basis where the primary virtual circuit is monitored, see e.g., column 9, lines 43-65. Thus it may be unclear as to whether a second virtual circuit is monitored and transmits detecting cells, see e.g., column 10, lines 8-10.

Rubino teaches the above limitation at e.g., column 3, lines 33-42.

Thus examiner purposes to modify the *Hamami* in clarifying that more than one virtual circuit can transmit detecting cells.

Examiner notes that it would have been obvious to someone skilled in the art to transmit a plurality of detecting cells on each virtual circuit. In particular, one skilled in the art would be motivated to perform the modification since a logical connection can comprise one or more (i.e., two) virtual channels at a data link layer. In particular, *Rubino* provides the above-mentioned motivation at e.g., column 3, lines 30-40. Specifically, *Rubino* discloses two ATM management functions, alarm surveillance and connectivity verification [column 5, lines 50-51], where connectivity verification (i.e., the management function that is relevant to the rejection [column 6, lines 59-column 8, line 38]) is performed on more than one PVC [column 3, lines 33-42]. In particular, a PVC is monitored to determine if the PVC is active. If the PVC is not active then another PVC is selected. In other words, by monitoring more than one PVC to determine activity the process or selecting a redundant (active) PVC is optimized. In order to determine which PVCs are active, more than one PVC need to be monitored. Examiner notes a further reasonable expectation of success since both references disclose ATM and virtual circuits for transmitting data.

As to **claim 3**, *Hamami* discloses an ATM network [column 1, lines 10-17].

As to **claim 5**, both references discloses transmitting cells at a predetermined frequency [e.g., *Rubino* column 6, lines 63-64].

As to **claim 7**, both reference disclose detecting a “gap” when no OAM cells are received.

As to **claim 8**, *Rubino* discloses waiting for one or more OAM cells [column 7, lines 20-21, column 12, lines 40-54]. Thus examiner notes that it would have been obvious to look of any number of cells such as three or five OAM cells.

As to **claim 9**, see the rejection for claim 1.

As to **claim 13**, *Hamami* teaches using ATM cells to transport the data.

As to **claim 15**, in addition to the rejection for claim 1, a line card and gateway module may not be obvious from the teachings of *Hamami* (although examiner notes that *Hamami* does teach routing in general). Examiner notes that it a gateway module and line card would have been either inherent or obvious given the combined rejections. As additional support, *Rubino* discloses routing at the edge. Thus *Rubino* also discloses a gateway module and line card.

As to **claim 16**, see the rejection for claim 5.

As to **claim 18**, see the rejection for claim 7.

As to **claim 19**, see the rejection for claim 8.

As to **claim 24**, see the rejection for claim 13.

As to **claim 27**, see the rejection for claim 3.

As to **claim 28**, see the rejection for claim 4.

As to **claim 29**, see the rejection for claim 5.

As to **claim 31**, see the rejection for claim 7.

As to **claim 32**, see the rejection for claim 8.

As to **claim 33**, see the rejection for claim 9.

As to **claim 37**, see the rejection for claim 13.

As to **claim 40**, see the rejection for claim 3.

As to **claim 41**, see the rejection for claim 4.

As to **claim 42**, see the rejection for claim 5.

As to **claim 44**, see the rejection for claim 7.

As to **claim 45**, see the rejection for claim 8.

As to **claim 46**, see the rejection for claim 9.

As to **claim 50** see the rejection for claim 13.

6. **Claims 2, 26, and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,22,820 to *Hamami* in view U.S. Patent No. 6,424,629 to *Rubino et al.* ("*Rubino*") and in further view of "ATM/IP in the 21st Century" by *Phillips*.

As to **claim 2**, examiner notes although *Hamami* mentions other technologies [column 5, lines 21-22], *Hamami* is silent or deficient to mentioning IP in particular (i.e., except at column 4, line 63). *Rubino* mentions IP [e.g., see column 14, lines 52-60]. Examiner notes that it would have been obvious to a skilled artisan prior to applicant's invention to combine IP and ATM (e.g., run IP over ATM). As further support *Phillips* discloses the integration of IP and ATM as well as running IP over ATM [see at least bottom on page 3]. Thus *Phillips* provides motivation.

As to **claim 26**, see the rejection for claim 2.

As to **claim 39**, see the rejection for claim 2.

7. **Claims 6, 10-12, 17, 20-23, 30, 34-36, 43, and 47-49** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,22,820 to *Hamami* in view U.S. Patent No.

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6,424,629 to *Rubino et al.* ("*Rubino*") in further view of "Monitoring and Control of ATM Networks Using Special Cells" to *Chen et al.* ("*Chen*").

As to **claim 6**, both references disclose using F5 OAM cells, however, it may not be clear that the correlation tag has an incrementing sequence number. For example, *Rubino* discloses that the correlation tag is set to an identifiable value that is included by remote ATM router 108 but is not clear on exactly what the value is other than the value is used for correlation [column 7, lines 47-53].

Examiner notes that it would have been obvious to someone skilled in the art prior to applicant's invention to include a sequence number as the value. Examiner notes a motivation is that a sequence number provides a correlation used to help detect cell loss. As additional support, *Chen* discloses a sequence number in general for a test cell in figure 1 on page 30 where the sequence number is used to detect test cell loss or misinsertion. Thus *Chen* provides a motivation for including a sequence number as part of a value for the correlation for a test cell in general where a test cell is an OAM cell.

As to **claims 10 and 11**, see the rejection for claim 6 where it also would have been obvious to check the sequence number of an OAM cell to detect a failure. The motivation that OAM cells out of order will signify that an OAM cell was lost which constitutes a failure as is known in the art. In addition, *Rubino* discloses switching the backup (i.e., second connection) if cells are detected on a first or primary connection (i.e., in reference to applicant's block 550 in figure 5). Examiner notes that it also would have been obvious to someone skilled in the art to also maintain the connection. One motivation for maintaining the rejection would be to reduce the complexity of the system.

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As to **claim 12**, see the rejection for claim 8.

As to **claim 17**, see the rejection for claim 6.

As to **claim 20**, see the rejection for claim 10.

As to **claim 21**, see the rejection for claim 10.

As to **claim 22**, see the rejection for claim 11.

As to **claim 23**, see the rejection for claim 12.

As to **claim 30**, see the rejection for claim 6.

As to **claim 34**, see the rejection for claim 10.

As to **claim 35**, see the rejection for claim 11.

As to **claim 36**, see the rejection for claim 12.

As to **claim 43**, see the rejection for claim 6.

As to **claim 47**, see the rejection for claim 10.

As to **claim 48**, see the rejection for claim 11.

As to **claim 49** see the rejection for claim 12.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225.

The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


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